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| 13. SUPPLEMENTARY NOTES | | | | |
| 14. ABSTRACT The DANDE program has progressed from engineering and test units to near-flight and flight hardware. Significant testing has occurred within the last year including a mass properties test, RF testing, communication system end-to-end testing, mechanism thermal vacuum testing, software performance testing and science instrument tests. For the accelerometer instrument, signal and noise tests have occurred which have successfully demonstrated their filtering and amplification capabilities. The wind and temperature spectrometer has also undergone vacuum chamber testing with an ion source at NASA Goddard and within University of Colorado facilities. These tests have allowed for further refinement of the instrument with both its high voltage components and its firmware. Finally, operational planning has occurred allowing for development of the ground infrastructure to operate DANDE on orbit. The ground station and ground command and data handling systems have developed such that they can transfer data between the DANDE engineering unit and the ground systems. | | | | |
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Subject: Progress Statement to Dr. Kent Miller

Contract/Grant Title: Distributed Atmospheric Neutral Density Explorer (DANDE)

Contract/Grant #: FA9550-09-1-0641

Reporting Period: February 1, 2010 to August 31, 2010

Annual accomplishments:

The DANDE mission to study density, wind and composition relationships to drag is undergoing final development testing and will be moving into proto-flight build this summer.

The DANDE program has progressed from engineering and test units to near-flight and flight hardware. Significant testing has occurred within the last year including a mass properties test, RF testing, communication system end-to-end testing, mechanism thermal vacuum testing, software performance testing and science instrument tests. For the accelerometer instrument, signal and noise tests have occurred which have successfully demonstrated their filtering and amplification capabilities. The wind and temperature spectrometer has also undergone vacuum chamber testing with an ion source at NASA Goddard and within University of Colorado facilities. These tests have allowed for further refinement of the instrument with both its high voltage components and its firmware. Finally, operational planning has occurred allowing for development of the ground infrastructure to operate DANDE on orbit. The ground station and ground command and data handling systems have developed such that they can transfer data between the DANDE engineering unit and the ground systems.

The team has presented posters at the MURI, QB50 and Small Satellite Conference.

Archival publications (published) during reporting period: NONE

Changes in research objectives, if any: NONE

Change in AFOSR program manager, if any: NONE

Extensions granted or milestones slipped, if any: NONE

Include any new discoveries, inventions, or patent disclosures during this reporting period (if none, report none): NONE